Impact of *Cladophora* mats on *E. coli* concentrations in beach water in Door County, WI

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Large mats of the green alga, *Cladophora*, have made a resurgence in the past few years along the shores of Lake Michigan, and recent research suggests that these mats may harbor large amounts of the microbial water quality indicator, *E. coli.* If mats of *Cladophora* are able to provide conditions suitable for the increased survival of *E. coli*, it is possible that pathogens associated with the presence of fecal material are able to persist as well, posing an increased risk to swimmers in affected areas. While there are several researchers investigating questions related to the presence of *Cladophora* in the Great Lakes, this presentation will discuss both field and laboratory research projects being conducted by researchers at the University of Wisconsin - Oshkosh. The results from year 1, of a 3-year field study, undertaken in 2007, investigating the spatial impacts of *Cladophora* on surrounding beach water will be presented. Additionally, the results from a laboratory microcosm study on the survival of *Salmonella*, *Shigella*, and *Campylobacter* in the presence of *Cladophora* will also be presented. Laboratory microcosm research suggests that the potential for *Cladophora* to prolong the survival of *E .coli* may be much greater than its ability to prolong the survival of some associated pathogens. Field research indicates that while *Cladophora* mats may harbor large amounts of *E. coli* in the mat proper, in calm weather these mats may not be contributing greatly to surrounding beach water *E. coli* concentrations. Additionally, several community management strategies for combating *Cladophora* on beaches will be explored during this presentation.

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